



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE

United States Patent and Trademark Office

Address: COMMISSIONER FOR PATENTS

P.O. Box 1450

Alexandria, Virginia 22313-1450

www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|-------------------------|---------------------|------------------|
| 10/540,495 | 06/23/2005 | Srivatsan Srinivas Iyer | 2003B002/2 | 4240 |

23455 7590 03/16/2010
EXXONMOBIL CHEMICAL COMPANY
5200 BAYWAY DRIVE
P.O. BOX 2149
BAYTOWN, TX 77522-2149

EXAMINER

KRUER, KEVIN R

ART UNIT

PAPER NUMBER

1794

MAIL DATE

DELIVERY MODE

03/16/2010

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/540,495

Applicant(s)

IYER, SRIVATSAN SRINIVAS

Examiner

KEVIN R. KRUEER

Art Unit

1794

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 December 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10, 12-20, 23-47, 49-65, 143-146, 148-176 and 178-198 is/are pending in the application.
- 4a) Of the above claim(s) 66-142 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-10, 12-20, 23-47, 49-65, 143-146, 148-176 and 178-198 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 23 June 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-946)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The rejection of claims 1-10, 12-20, 23-47, 49-665, 143-146, 148-176 and 178-198 under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement has been overcome by amendment.
2. The rejection of claims 1-10, 12-20, 23-47, 49-65, 143-146, 148-176 and 178-198 under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention has been overcome by amendment.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.
4. Claims 1-10, 12-20, 23-47, 49-65, 143-146, 148-176 and 178-198 are rejected 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Tsurutani et al (US 5,472,792).

Tsurutani teaches an amorphous layer comprising 20-100% amorphous propylene copolymer (herein understood to read on the low crystallinity polymer) and 80-0% of a crystalline polypropylene (herein relied upon to read on the claimed additional polymer). Said additional polymer is understood to have a compatible

crystallinity with the amorphous polymer since both have the same crystallizable sequences (see 0081). The amorphous polymer may comprise 1-20wt% ethylene (col 3, lines 65+)-which is herein understood to be sufficient to anticipate the claimed 10-20wt% range. Furthermore, the amorphous polymer has a molecular weight (col 3, lines 15+) which overlaps the molecular weight of the claimed low crystallinity polymer (0046). Thus, the amorphous polymer is understood to anticipate the claimed Mooney viscosity since viscosity is directly proportional to molecular weight. Since said polymer may be made as a byproduct of the crystalline polymer (col 3, lines 31+), it is understood to have the same stereo-regularity. The amorphous polymer has an n-heptane solubility of greater than 40%. Said test is a measure of the crystallinity of a polymer, with higher crystalline materials having a lower n-heptane value. Said test is an alternative to DSC with regards to determining crystallinity and said n-heptane soluble range is understood to be sufficiently specific to anticipate the claimed crystallinity of the lower crystallinity polymer.

The laminate of Tsurutani further comprises a crystalline propylene layer. Said composition may be the same or different than the crystalline polymer used in the amorphous layer (col 5, lines 26+). Specifically, said layer may be a homopolymer or a propylene copolymer containing up to 20wt% of comonomers such as ethylene (col 4, lines 38+). Said layer is understood to be inherently "capable of undergoing plastic deformation upon elongation" since it is compositionally identical to applicant's claimed high crystalline layer. The layer may have isotactic stereo-regularity (col 4, lines 19+).

Said polymer is n-heptane insoluble and thus has a crystallinity greater than the amorphous polymer.

Tsurutani does not teach the temperature difference the melting point difference between the two layers should be at least 25C. However, it would have been obvious to optimize the difference in temperature by lowering the melting point of the amorphous layer in order to improve its surface adhesivity (col 6, lines 48+).

With regards to claims 7, 25, and 26, an additional layer of high crystalline polymer may be contained in the laminate (col 6, lines 33+). With regards to claim 24, the "additional layer" may comprise a second low crystallinity polymer layer. With regards to claim 27, the laminate comprising B/A/X reads on the claimed invention wherein X is a lower crystalline polymer such as a sealable layer.

With regards to claims 12-15, it would have been obvious to optimize the properties of the low crystallinity polymer by utilizing a metallocene catalyst in order to obtain a uniform composition with the desired low temperature adhesivity.

With regards to claims 29-31, Tsurutani does not teach the claimed haze but teaches the laminate may comprise calcium carbonate, clay and talc (col 5, lines 3+). Said additives are known in the art to increase haze. Thus, it would have been obvious to optimize haze by optimizing the amount of said additive in the laminate.

With regards to claims 32-37, said properties are herein understood to be inherent to the films taught in Tsurutani.

With regards to claim 10, Tsurutani teaches a range of ethylene content that encompasses the claimed range. Thus, said range is understood to be anticipated by

Tsurutani since the prior art teaching is sufficiently specific to anticipate the claimed range. Alternatively, it would have been obvious to optimize the ethylene content of the amorphous polymer in order to melting point/softness of the film (col 3, lines 65+).

With regards to 171 and 172, the garment limitations are preamble limitations that are understood not to further limit the claim in any way.

Response to Arguments

Applicant's arguments filed December 17, 2009 have been fully considered but are not persuasive.

Claim Rejections-35 USC 112

Applicant's amendments are sufficient for overcoming the 112, second paragraph rejections of the non-final office action

Claim Rejections-35 USC 102 and 103

According to applicant, the examiner unpersuasively concludes the low melting point propylene taught in Tsurutani meets the claimed melting point. While applicant concedes the melting point of propylene ethylene copolymers depend on the ethylene content, applicant argues there is no direct correlation between ethylene content and melting point because other variables also affect the melting point. Said argument is noted but fails to overcome the pending rejection because applicant fails to address the examiner's obviousness position with regards to optimizing the melting point of the low melting point material.

Applicant further argues there is no evidence of record to support the conclusion that the n-heptane soluble content of Tsurutani correlate to the claimed DSC limitations. The examiner respectfully disagrees. The n-heptane solubility is a measure of the amount of amorphous material in the composition. Specifically, amorphous olefin materials are soluble in n-heptane and crystalline olefin materials are not. Since the polymer taught in Tsurutani is at least 40% amorphous (ie at least 40% soluble in n-heptane), it follows the crystallinity of the copolymer can be no greater than 60%. Stated differently, the crystallinity of the copolymer taught in Tsurutani is 0-60%, which overlaps applicant's claimed range. D Since applicant fails to rebut the examiner's position that the claimed crystallinity is anticipated by Tsurutani, the rejection is maintained.

For the reasons noted above, the rejection is maintained.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to KEVIN R. KRUEER whose telephone number is (571)272-1510. The examiner can normally be reached on Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Callie Shosho can be reached on 571-272-1123. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Kevin R Krueer/
Primary Examiner, Art Unit 1794